

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-32 (cancelled).

23. (currently amended) A method of digital communicating via a three-wire link between among

- a first unit having at least one serial data input and a write select command output;
- at least two second units, each having a serial data output and a write select command input;
- a one-wire serial data communication line interconnecting said second unit serial data outputs and said serial data input;
- a one-wire write select command line interconnecting said write select command output and said second unit write select command inputs;
- a clock wire line interconnecting said first and said at least two second units;

comprising the steps of:

establishing communication from said second units to said first unit by generating from said write select command output a write select command signal to said write select command inputs, thereby establishing which of said second units is allowed to write data on said serial data communication line;

establishing communication from said first unit to said second units by encoding at said first unit upon said write select command signal on said write select command line further data, and decoding said further data from said write select command line at said second units.

34. (previously presented) The method of claim 33, wherein said serial data communication line interconnects two of said at least two second units, both of said two second units being removable, further comprising detecting at at least one of said two second units whether the other of said second units is not removed.

35. (previously presented) The method of claim 34, said detecting comprising generating on each of said two second units which is not removed a random digital signal on said serial data communication line.

36. (previously presented) The method of claim 35, said random digital signal being generated by means of an analogue to digital converter.

37. (previously presented) The method of claim 35, said detecting further comprising comparing at each of said two second units not removed said random signal respectively generated with the random signal prevailing on said serial data communication line.

38. (previously presented) The method of claim 37, further comprising storing the occurrence of a predetermined comparison result at a respective one of said two second units.

39. (previously presented) The method of claim 37, further comprising assigning, as a function of a result of said comparing, time frames of said write select signal as write allowing cycles to one of said two second units and further time frames of said write select signal as write allowing cycles to the other of said two second units.

40. (previously presented) The method of claim 35, further comprising generating said random digital signal on said serial data communication line via a "wired AND" function.

41. (previously presented) The method of claim 37, further comprising at each of said two second units and during a predetermined amount of time monitoring whether a predetermined result of said comparing occurs or not, further monitoring at a respective one of said second units, whereat said predetermined result did not occur during said predetermined amount of time, whether there is a digital random signal on said serial data communication line when said respective one second unit is inhibited to write by said write select signal and defining said respective one of said second units as the sole second unit not removed if said further monitoring reveals that no digital random signal is present.

42. (previously presented) The method of claim 41, further comprising applying a predetermined electric potential on said serial data communication line by said sole second unit not removed as defined, during time spans when said sole second unit is inhibited to write by said write select signal.

43. (previously presented) The method of claim 34, further comprising initiating said detecting upon powering said first and second units.

44. (previously presented) The method of claim 33, further comprising providing more than two of said second units, providing for each pair and remaining single one of said second units one of said serial data communication lines and a

respective further one of said serial data inputs at said first unit.

45. (previously presented) The method of claim 33, comprising generating at least at a part of said at least two second units addresses by means of random digital signals.

46. (previously presented) The method of claim 35, comprising generating at least at a part of said at least two second units addresses by means of said random digital signals.

47. (previously presented) The method of claim 46, further comprising collecting said addresses at said first unit and initiating by said first unit and via said write select line a further generating of addresses if at least two of said addresses coincide.

48. (previously presented) The method of claim 33, comprising said further data being communicated via said write select line only during predetermined cycle times of said write select signal.

49. (previously presented) The method of one of claims 33 to 46, wherein said first unit is a digital signal processing unit of a hearing device, said second units being units of said hearing device.

50. (previously presented) The method of claim 49, said second units being selected from the group of acoustical/electrical converters, electric actuators, T-coils, interface units, adjusting members, thereby potentiometers, switches.

51. (previously presented) The method of claim 50, said second units acting via an analogue to digital conversion on said serial data communication line.

52. (previously presented) The method of claim 51, said conversion being performed in said second units.

53. (currently amended) A system for digital communication, comprising:

- a digital processing unit having at least one input for serial digital data and an output for a write select signal;
- at least two removable further units, each with an output for serial digital data and an input for a write select signal;
said removable further unit ~~outputs of two of said further units~~ being connected by a first single-wire line to said input of said digital processing unit;
- said output of said digital processing unit being connected to said removable further unit ~~inputs of said two further units~~ by a second single-wire line;
- said digital processing unit and said further units being interconnected by a third single wire line for a clock signal; said digital processing unit having an encoder operationally connected to said output for said write select signal to encode upon said second line further signals;
- said two removable further units having each a decoder operationally connected to said removable further unit inputs for said write select signal to decode said further signals.

54. (previously presented) The system of claim 53, a random digital signal generator being provided at each of said two further units, having an output operationally connected to said first single-wire line.

55. (previously presented) The system of claim 54, said output of said random digital signal generator and said first single-wire line being operationally connected to inputs of a comparator unit at said further units.

56. (previously presented) The system of claim 55, said generator comprising a analogue to digital converter.

57. (previously presented) The system of claim 55, said digital processing unit generating at said output for said write select signal signal cycles with a selecting function for one of said further units to write and to be inhibited, the other to write and further cycles with an inverse function, an output of said comparator unit controlling cycle to function assignment.

58. (previously presented) The system of claim 55, wherein said random digital signal generator is operationally connected to said first single-wire line via a "wired AND" function.

59. (previously presented) The system of claim 53, said further units having a controllable switching arrangement being operationally connected with said output for serial digital data and having a control input operationally connected to said input for said write select signal, thereby controllably switching said output for serial digital data on a defined electrical potential.

60. (previously presented) The system of claim 54, said random digital signal generator being started by applying power to the respective further unit.

61. (previously presented) The system of claim 53, wherein more than two further units are provided and each pair or single

further unit is linked to said digital processing unit via one of said first single-wire lines.

62. (previously presented) The system of claim 53, wherein each of said further units has a controllable random digital signal generator, the output thereof being operationally connectable to said output for serial digital data controlled by a predetermined signal applied to said second single-wire line, whereby a sequence of said random digital signals is stored in a storage in said digital processing unit as well as in respective further storages in said further units.

63. (previously presented) The system of claim 62, wherein said sequence and a signal cycle value of said write select signal which selects a respective further unit to write is stored at said respective further unit in an address storage unit as well as in a further storage in said digital processing unit, the addresses stored in said digital processing unit being led to a comparator unit, the output of which initiating via said second single-wire line generating a further sequence to be generated.

64. (previously presented) The system of claim 53, wherein said encoder at said digital processing unit is operationally connected to a time control unit which controls generating of said further signal upon said second line only in predetermined time spans of a cycle of said write select signal.

65. (previously presented) The system of claim 53, wherein said digital processing unit is a digital processing unit of a hearing device, said further units being units of said hearing device.

66. (previously presented) The system of claim 65, wherein said further units are selected from the group including acoustical/electrical converters, electrical actuators, T-coils, interface units, adjusting members, thereby potentiometers or switching units.